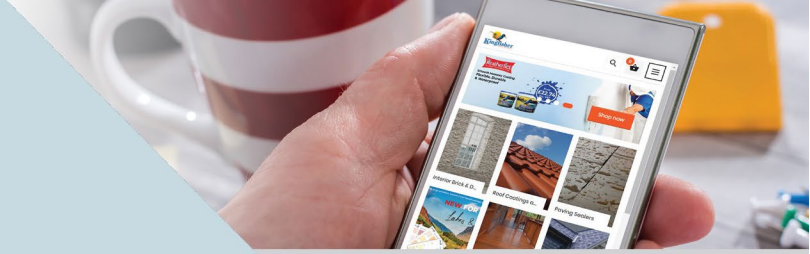


TECHNICAL
DATA SHEET

Low Odour DPC Injection Fluid

DESCRIPTION

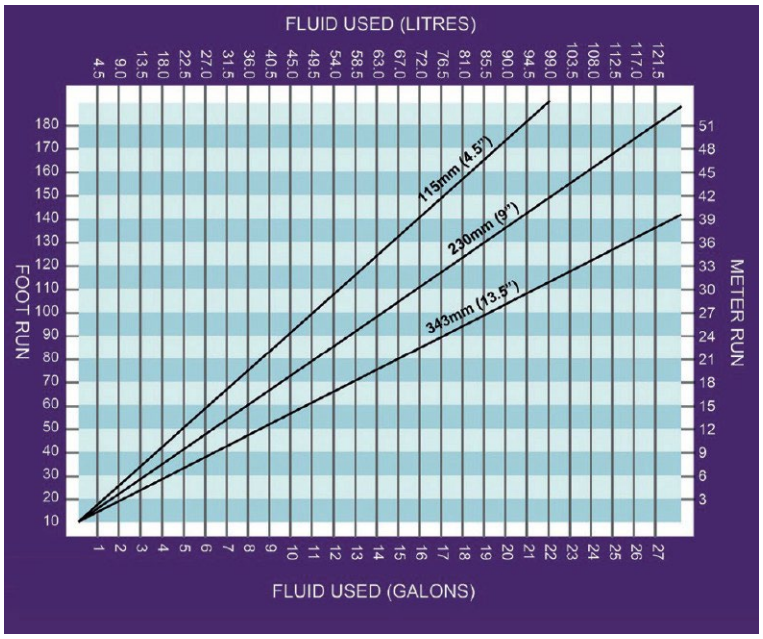
"Kingfisher Low Odour DPC Injection Fluid" is a highly versatile chemical DPC (Damp Proof Course) injection system, developed to remediate rising damp in a wide variety of stone and brick wall constructions, without resort to destructive structural interventions. When injected under pressure with a damp proofing pump, its complex "Poly Oxo Aluminium Stearate" chemistry is uniquely capable of impregnating a wide range of porous mineral substrates to total saturation. Absorbing multi-dimensionally, "Kingfisher Low Odour DPC Injection Fluid" cures within the building's substrate to form a durable hydrophobic layer that blocks the progression of rising damp. The formulation uses the latest D40 de-aromatised petroleum distillate to control odour both during and following treatment for rising damp. PROFESSIONAL USE ONLY.

Companion / Related Products:

- Limelite "Drywall Renovating Plaster"
- Kingfisher "Damp Guard Liquid Membrane"
- Kingfisher "Rendermix"
- Kingfisher "Anti-Sulphate Solution"

(Refer to individual product data sheets for detailed application guidance – published on www.kingfisheruk.com)

HOW MUCH DO I NEED?



Use this table to work out the amount of fluid required for 4.5", 9" & 13.5" thick brickwork.

Two holes per brick are normally recommended.

In dense brickwork three holes may be required to equalise distribution of the fluid, thereby achieving total saturation of the injected course.

No uniformity of construction exists so fluid requirements will differ significantly.

Note: Different site conditions may cause variation. Allow 10% extra for estimating purposes.

USES

Whilst modern buildings have a durable polyethylene damp proof course built-into the masonry, many older properties had no damp proof course (DPC) or the original material has decayed over time (e.g. tar) to the point of failure. "Kingfisher Low Odour DPC Injection Fluid" allows users to inject a new chemical DPC to effectively control rising damp in domestic and commercial environments. "Kingfisher Low Odour DPC Injection Fluid" can be used on many different types of masonry including:

- 4.5" & 9" solid brick walls
- Brick cavity walls.
- Random rubble infill walls
- Dressed stone walls with regular mortar joints.

If in doubt, please call our technical services department on 01229 869 100 for guidance.

ADVANTAGES

"Kingfisher Low Odour DPC Injection Fluid" injected under pressure offers unrivalled versatility in tackling rising damp in both routine and complex remedial damp proofing projects.

- Reliability: Pressure injection achieves unrivalled distribution of the fluid, with correspondingly dependable results.
- Consistent application rate.
- Structural Integrity: Injected into brickwork, there is less risk of failure due to deteriorated mortar beds, which can limit the performance of non-pressure injected DPC creams in decaying walls.
- Breathable Protection: Allows residual moisture and vapour to escape while preventing further ingress.
- Ideal for Heritage & Renovation: Suitable for use in sensitive or listed properties where damp control is critical.

PREPARATION

Before undertaking any remedial DPC injection work, firstly eliminate other possible causes of dampness. Specifically, you should check that all rainwater goods and drainage pipes are in good condition. Leaky downpipes and cracked gutters are a common source of damp ingress which should be eliminated before resorting to remedial injection. Rising damp rarely climbs above 1200mm so if the dampness inside is appearing beyond that, consider the possibility of penetrating damp and seek advice from Kingfisher Technical Services department. Having determined that rising damp is present you can prepare to install a "Dri-Wall" chemical DPC in accordance with BS6576:2005 - Code of Practice for diagnosis of rising damp in walls of buildings and installation of chemical damp-proof courses.

1. Expose area to be injected

Remove skirting boards, facings and all fixtures and fittings, including radiators to reveal the plaster / drywall. All plaster affected by rising damp is likely to be contaminated with "hygroscopic" salts and should be hacked off from ground level up to 1200 mm ("Hygroscopic" salts originate in the ground and are uniquely destructive to plaster

finishes, so require careful treatment). If timber floor, lift a couple of the floorboards to inspect the timbers for signs of moisture contamination and fungal decay. If any is evident, arrange for treatment to be carried out and if necessary, contact our technical services department for guidance.

In the case of cavity walls, it is worth obtaining a mini-inspection camera to check that the cavity is clear of debris that could "bridge" the new DPC. Be aware that the recent popularity of cavity wall insulation has fuelled an epidemic of rising damp problems caused by the insulation material "bridging the DPC". DO NOT INJECT THE FLUID INTO ANY CAVITY WALL WHICH YOU KNOW OR SUSPECT TO HAVE BEEN FILLED WITH CAVITY WALL INSULATION (CWI). The solvent in "Kingfisher Low Odour DPC Injection Fluid" can melt or degrade some types of CWI. CWI must be removed by a competent and certified CWI removal contractor prior to injection.

2. Where to inject? (Timber floors)

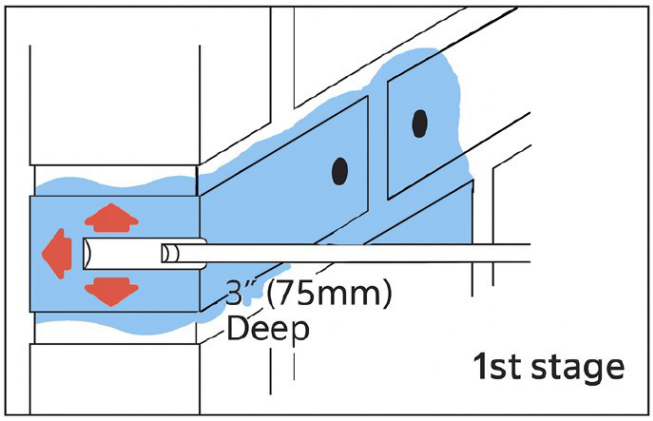
The objective is to contain damp at a level below flooring timbers, skirting boards and plaster finishes, all of which readily absorb moisture leaving them vulnerable to decay. You should always inject at least 150mm above external ground level. In properties with timber floors, you should inject below the floor level to protect the joists from dampness and the fungal decay which inevitably accompanies it. If structural issues or external ground levels preclude this, other methods may have to be adopted (e.g., Tanking) to protect floor joist timbers and you should contact Kingfisher technical services for guidance.

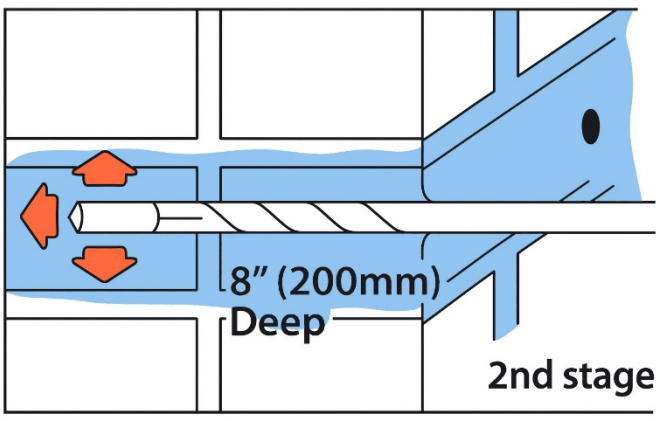
3. Where to inject? (Solid floors)

With solid (e.g., concrete) floors it is not usually possible to drill holes along the bottom course of mortar as the floor gets in the way. In this case you should inject the first course which is above the internal floor and at least 150mm above the external ground level.

4. Drilling

Solid Brick walls





Common brick walls should be injected directly into the brick, at a rate of 2 holes per brick, roughly equidistant. For modern 215mm bricks with 10mm mortar joints, this equates to drilling holes spaced at roughly 112mm centres along the course. For single brick walls, typically drill to a depth of 75mm using a drill with a depth gauge set appropriately, or alternatively measure your masonry drill bit shank to 75mm and wrap with electrical tape as a marker.

Brick sizes can vary significantly according to the age and construction of the property being treated, but the rule of two holes generally applies.

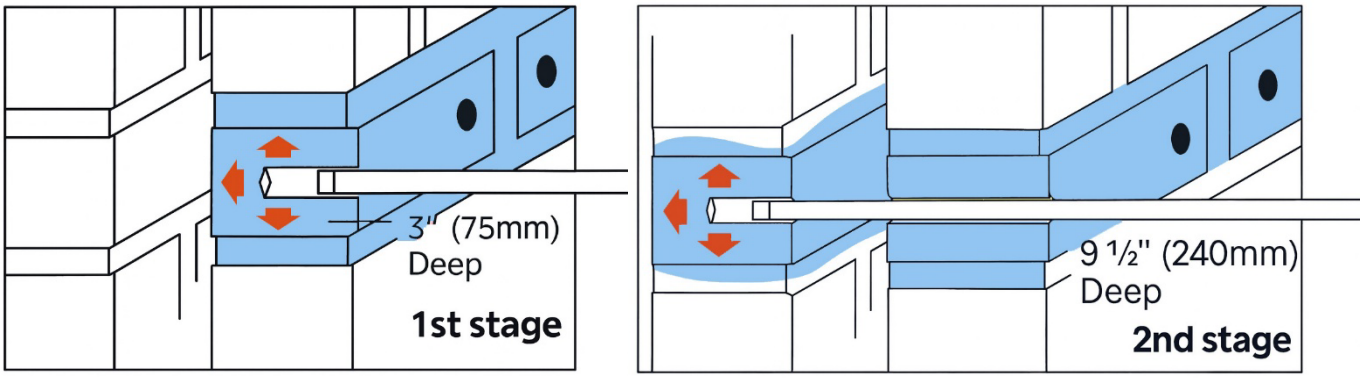
In the case of blue or engineering or blue brick, saturation may not be possible, in which case the mortar beds should be injected.

For 9” or double brick walls drilled from one side, drill 75mm into the first leaf and inject to saturation first. Then re-drill through the same hole to a depth of 200mm, to facilitate access to the second leaf.

Important! When injecting the first leaf, measure the time from starting the pump to achieving visible saturation, so you can apply the same timeline to injection of the hidden leaf behind.

For greater detail and diagrams, refer to the Kingfisher “Professional Manual of Chemical DPC Injection” in the downloads section of our website www.kingfisheruk.com.

Brick Cavity Walls



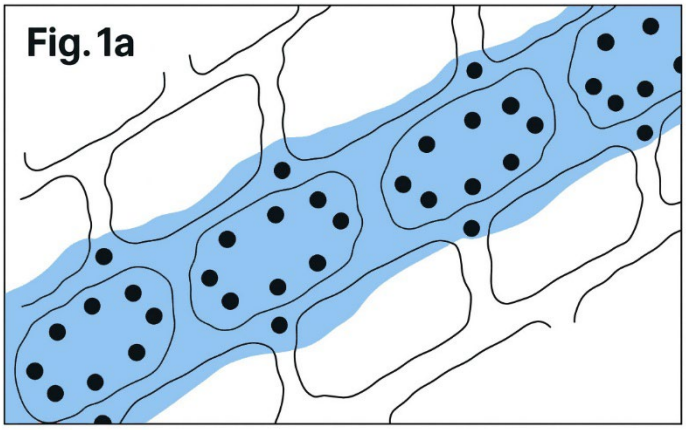
You can treat each leaf separately drilling the inner one from inside the building and the external leaf from the outside, in which case you set the drill depth as for single brick (75mm). Alternatively, when undertaking treatment from one side, drill 75mm into the first leaf and inject to saturation first. Then re-drill through the same hole to a depth of 240mm, to reach across the cavity and access the second leaf. Carefully introduce the injection rod through the first leaf and locate positively into the second leaf, ensuring the expansion nipple tightens to form a reliable seal. This to avoid fluid “blowing back” into the cavity. When double drilling it is advisable to re-drill the first hole at a wider diameter to facilitate easy withdrawal of injection rods from the second leaf.

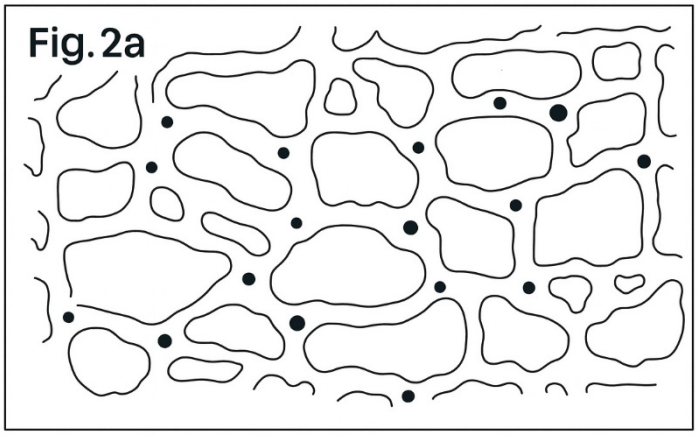
Important! When injecting the first leaf, measure the time from starting the pump to achieving visible saturation, so you can apply the same timeline to injection of the hidden leaf behind.

For greater detail and diagrams, refer to the Kingfisher “Professional Manual of Chemical DPC Injection” in the downloads section of our website www.kingfisheruk.com.

Take care to keep the drill perfectly horizontal when drilling so as to avoid the drill running off into the bricks on the second leaf. Always ensure that the cavity is clear before drilling and treatment.

c) Stone Walls





For centuries, the varied geology of the British Isles has provided builders with an equally varied selection, of stone and mineral based building materials. The softer varieties (chalk, sandstone, soft limestone) can often be injected, and the harder ones (granite, slate & oolitic limestone) can be injected around via the mortar joints.

Stone walls -dressed

Dressed stone walls of porous varieties should be drilled and injected, directly into the stone blocks and at strategic junctures in the surrounding mortar beds, as shown in the diagram. Fig.1a

The drill pattern is to achieve saturation around the perimeter of the stone, impregnating the adjacent mortar joints creating an “envelope” barrier to moisture. It is not necessary to drill the centre of the stone blocks as any moisture in the middle will be isolated.

Note: the exact drill pattern in the blocks will be determined by drilling and injecting a test hole to observe the time taken to impregnate the surrounding area. Drill depth is to 75% of the stone thickness, which can usually be measured at a corner.

Random stone walling

Random stone walling is usually composed of rubble and mortar, with the flatter or “best” faces placed to the outside, hiding a more chaotic interior construct. In these cases, greater efficiency will be achieved by “flooding” the mortar and rubble as illustrated in the diagram, especially if the stone is non-porous In some cases, it may be that “Tanking” a stone wall is the more practical approach, and you should contact Kingfisher technical services for guidance before commencing works.

APPLICATION

a) Injection

Kingfisher DPC Injection Fluid is best applied using a proprietary damp proofing pump, complete with manifold assembly and injection rods. Always check the condition of the hoses and clips before commencing injection as leaks of pressurised, flammable injection fluid can be hazardous. On each injection rod, check the expansion nipple for cracks, brittleness or damage and replace, as necessary. Place the suction tube filter end into the 25L drum of injection fluid along with the return tube and prime the pump, following the pump manufacturer's procedure. Purge the manifold and injection rods of air. Once the system is primed and bled of air bubbles, introduce the four rods into the pre-drilled holes and tighten the expansion nipples to form a tight seal. Activate the pump and observe as the liquid migrates through the substrate, until the spreading injection patterns overlap, indicating full impregnation.

b) Solid Floors

Where you are injecting above a solid floor internally there is an obvious weak point which needs to be bridged between the floor and the drill hole level, and we recommend applying 2 x coats of Kingfisher "Damp Guard liquid membrane" to this area. Pre-treat the area with "Kingfisher Anti-Sulphate Solution" to neutralise any ground water salts. To ensure adhesion without solvent contamination, the "Damp Guard" should be applied prior to injection, and painted from the proposed injection course down to the floor and 50 to 100 mm onto the floor.

c) Closing Holes

Re-point the visible drilled holes with a mortar which matches as closely as possible to the original.

d) Re-plastering

In common with all remedial damp course systems, the adequate removal and correct re-plastering of internal salt contaminated plaster is an ESSENTIAL (and often over-looked) requirement.

You should refer to the Kingfisher re-rendering specification and use only "Limelite drywall renovating plaster" which is formulated to "manage" both salt migration and moisture evaporation during the drying out phase. If in doubt, contact Kingfisher technical services department for guidance.

CLEAN UP

Pour 500 to 1000 ml of white spirit into the empty 25L drum, screw the cap on tightly and agitate the drum for 30 seconds. Empty the contents into a smaller receptacle and retain for future cleaning. Set the washed, empty drum to dry in a well-ventilated garage or workshop (away from naked flames or heat sources), the solvent residue will typically evaporate in 48 hours, leaving a clean drum for responsible recycling at local waste station.

Flush the injection pump and manifold/ rod assembly with white spirit.

PRODUCT DATA

Appearance	Clear
Description	Solvent based poly oxo aluminium stearate diluted in Premium D40 petroleum distillate
Flashpoint	42.28 deg C
Coverage	See Table
Migration & curing time	20 seconds to a few minutes (depending upon material porosity and density)
Application Temperature	+6 °C to +35 °C
Service Temperature	-20 °C to +50 °C

PACKAGING

“Kingfisher Low Odour DPC Injection Fluid” is supplied in 25L drums.

SHELF LIFE & STORAGE

The product has a shelf life of 24 months from the date of manufacture, subject to correct storage conditions. Store upright in original sealed packaging in a cool dry place, out of direct sunlight, away from sources of ignition and protected from frost. Keep out of reach of children.

HEALTH & SAFETY

For use only in well-ventilated areas by trained professionals.

- In all cases “Kingfisher Low Odour DPC Injection Fluid” should be installed in accordance with BS 6576 (1985).
- Wear disposable nitrile gloves and overalls during preparation and application.
- Avoid contact with skin and eyes.
- If contact occurs wash immediately with plenty of water.
- Keep out of reach of children.
- Ensure good ventilation during application and drying.
- Always dispose of empty packaging responsibly, flushing with white spirit and.
- Keep children and pets away from treated areas until fully cured.
- Accidental Spillage….. In the event of accidental spillage, the material should be wiped up immediately and the wipes placed in a plastic bag and disposed of appropriately.

Before using this product read the Material Safety Data Sheet which can be obtained at www.kingfisheruk.com or by calling the Kingfisher Technical Dept. Tel: 01229 869 100.

The information given in this product data sheet is given in good faith, based on current knowledge and experience. It relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of the company’s knowledge and belief, accurate as of the date indicated.

All recommendations are made without warranty or guarantee, as to accuracy, reliability, completeness since the conditions of use are beyond our control. It is the user’s responsibility to satisfy themselves as to the suitability and application of such information for their own use.